

10/578,250

(FILE 'HOME' ENTERED AT 21:21:51 ON 25 SEP 2007)

FILE 'REGISTRY' ENTERED AT 21:22:16 ON 25 SEP 2007

E CYANIDIN-3-RHAMNOSIDE/CN  
E CYANIDIN 3-RHAMNOSIDE/CN  
L1 1 S E3  
E PELARGONIDIN 3-RHAMNOSIDE/CN  
E PELARGONIDIN-3-RHAMNOSIDE/CN  
E PELARGONIDIN/CN  
L2 1 S E3

FILE 'CAPLUS' ENTERED AT 21:24:39 ON 25 SEP 2007

L3 25 S L1  
E DIABETES+ALL/CT  
L4 6 S L3 AND (GLUCOSE OR DIABETES)

10/578,250

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NEWS 1 Web Page for STN Seminar Schedule - N. America  
NEWS 2 JUL 02 LMedline coverage updated  
NEWS 3 JUL 02 SCISEARCH enhanced with complete author names  
NEWS 4 JUL 02 CHEMCATS accession numbers revised  
NEWS 5 JUL 02 CA/CAPLUS enhanced with utility model patents from China  
NEWS 6 JUL 16 CAPLUS enhanced with French and German abstracts  
NEWS 7 JUL 18 CA/CAPLUS patent coverage enhanced  
NEWS 8 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification  
NEWS 9 JUL 30 USGENE now available on STN  
NEWS 10 AUG 06 CAS REGISTRY enhanced with new experimental property tags  
NEWS 11 AUG 06 BEILSTEIN updated with new compounds  
NEWS 12 AUG 06 FSTA enhanced with new thesaurus edition  
NEWS 13 AUG 13 CA/CAPLUS enhanced with additional kind codes for granted patents  
NEWS 14 AUG 20 CA/CAPLUS enhanced with CAS indexing in pre-1907 records  
NEWS 15 AUG 27 Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB  
NEWS 16 AUG 27 USPATOLD now available on STN  
NEWS 17 AUG 28 CAS REGISTRY enhanced with additional experimental spectral property data  
NEWS 18 SEP 07 STN AnaVist, Version 2.0, now available with Derwent World Patents Index  
NEWS 19 SEP 13 FORIS renamed to SOFIS  
NEWS 20 SEP 13 INPADOCDB enhanced with monthly SDI frequency  
NEWS 21 SEP 17 CA/CAPLUS enhanced with printed CA page images from 1967-1998  
NEWS 22 SEP 17 CAPLUS coverage extended to include traditional medicine patents  
NEWS 23 SEP 24 EMBASE, EMBAL, and LEMBASE reloaded with enhancements  
NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.  
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\* \* \* \* \* STN Columbus \* \* \* \* \*

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=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 21:22:16 ON 25 SEP 2007

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 24 SEP 2007 HIGHEST RN 947820-54-4  
DICTIONARY FILE UPDATES: 24 SEP 2007 HIGHEST RN 947820-54-4

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> e cyanidin-3-rhamnoside/cn

E1	1	CYANIDIN-3-O-SOPHOROSIDE 5-O-GLUCOSIDE/CN
E2	1	CYANIDIN-3-RHAMNOGLUCOSIDO-7-XYLOSIDE/CN
E3	0 -->	CYANIDIN-3-RHAMNOSIDE/CN
E4	1	CYANIDIN-3-RHAMNOSYLGALACTOSIDE/CN
E5	2	CYANIDINE/CN
E6	1	CYANIDINE 3-ARABINOSIDE/CN
E7	1	CYANIDINE 3-SAMBUBIOSIDE/CN
E8	1	CYANIDINE 3-SOPHOROSIDE/CN
E9	2	CYANIDOL/CN
E10	1	CYANIDOL 3,5-DIGLUCOSIDE CHLORIDE/CN
E11	1	CYANIDOL 3,5-DIGLUCOSIDE COUMARATE/CN
E12	1	CYANIDOL 3-GLUCOSIDE/CN

=> e cyanidin 3-rhamnoside/cn

E1	1	CYANIDIN 3-RHAMNOGLUCOSIDE/CN
E2	1	CYANIDIN 3-RHAMNOGLUCOSIDE GLUCOSIDE/CN
E3	1 -->	CYANIDIN 3-RHAMNOSIDE/CN
E4	1	CYANIDIN 3-RHAMNOSIDE-5-GLUCOSIDE/CN
E5	1	CYANIDIN 3-RHAMNOSYLGUCOSIDE/CN
E6	1	CYANIDIN 3-ROBINOBOSIDE/CN
E7	1	CYANIDIN 3-RUTINOSIDE/CN
E8	1	CYANIDIN 3-RUTINOSIDE-5-GLUCOSIDE/CN
E9	1	CYANIDIN 3-SAMBUBIOSIDE/CN
E10	1	CYANIDIN 3-SAMBUBIOSIDE-5-GLUCOSIDE/CN
E11	1	CYANIDIN 3-SAMBUBOSIDE/CN
E12	2	CYANIDIN 3-SOPHOROSIDE/CN

=> s e3

L1 1 "CYANIDIN 3-RHAMNOSIDE"/CN

=> e pelargonidin 3-rhamnoside/cn

E1	1	PELARGONIDIN 3-O-RUTINOSIDE-5-O-COUMAROYLGLUCOSIDE/CN
E2	1	PELARGONIDIN 3-RHAMNOGALACTOSIDE/CN
E3	0 -->	PELARGONIDIN 3-RHAMNOSIDE/CN
E4	1	PELARGONIDIN 3-RHAMNOSIDE-5-GLUCOSIDE/CN
E5	1	PELARGONIDIN 3-RHAMNOSYLGUCOSIDE/CN
E6	1	PELARGONIDIN 3-ROBINOBOSIDE/CN
E7	1	PELARGONIDIN 3-RUTINOSIDE/CN
E8	1	PELARGONIDIN 3-RUTINOSIDE-5-GLUCOPYRANOSIDE/CN
E9	1	PELARGONIDIN 3-SOPHOROSIDE/CN
E10	1	PELARGONIDIN 3-SOPHOROSIDE 5-GLUCOSIDE CINNAMATE/CN
E11	1	PELARGONIDIN 3-SOPHOROSIDE 7-GLUCOSIDE/CN
E12	1	PELARGONIDIN 3-SOPHOROSIDE-5-GLUCOSIDE/CN

=> e pelargonidin-3-rhamnoside/cn

E1	1	PELARGONIDIN-3-(2'-ACETYLRUTINOSIDE)/CN
E2	1	PELARGONIDIN-3-GLU/CN
E3	0 -->	PELARGONIDIN-3-RHAMNOSIDE/CN
E4	1	PELARGONIDIN-3-RUTINOSIDE P-COUMARATE/CN
E5	1	PELARGONIDIN-3-RUTINOSIDE-5-GLUCOSIDE/CN
E6	1	PELARGONIDIN-3-RUTINOSIDE-5-GLUCOSIDE FERULATE/CN
E7	1	PELARGONIDIN-3-RUTINOSIDE-5-GLUCOSIDE P-COUMARATE/CN

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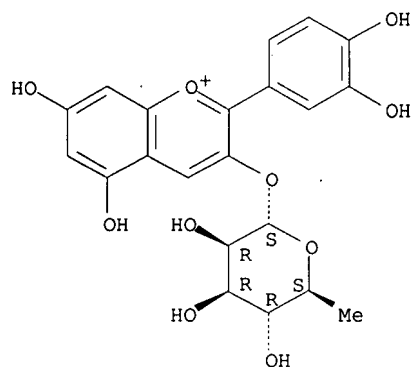
10/578,250

E8 1 PELARGONIDIN-3-SOPHOROSIDE-5-GLUCOSIDE/CN  
E9 1 PELARGONIDIN-3-SOPHOROSIDE-5-GLUCOSIDE FERULATE/CN  
E10 1 PELARGONIDIN-3-SOPHOROSIDE-5-GLUCOSIDE P-COUMARATE/CN  
E11 1 PELARGONIDIN-3-SOPHOROSIDE-5-GLUCOSIDE-FERULATE MALONATE/CN  
E12 1 PELARGONIDIN-3-SOPHOROSIDE-5-GLUCOSIDE-P-COUMARATE MALONATE/  
CN

=> d 11

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 38533-30-1 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-, chloride (1:1) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-, chloride (9CI)  
CN 3',4',5,7-Tetrahydroxy-3-(rhamnosyloxy)flavylium chloride (7CI)  
CN Cyanidin 3-rhamnoside (6CI)  
FS STEREOSEARCH  
DR 30138-63-7  
MF C21 H21 O10 . Cl  
LC STN Files: BIOSIS, CA, CAOLD, CAPLUS, CHEMCATS, CSCHEM, NAPRALERT, TOXCENTER, USPATFULL  
CRN (768299-10-1)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

25 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
25 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e pelargonidin/cn

E1 1 PELARGONIC AMIDE/CN  
E2 1 PELARGONIC ANHYDRIDE/CN  
E3 1 --> PELARGONIDIN/CN  
E4 1 PELARGONIDIN 3,5-DI-B-D-GLUCOPYRANOSIDE/CN  
E5 1 PELARGONIDIN 3,5-DI-B-D-GLUCOSIDE/CN  
E6 1 PELARGONIDIN 3,5-DI-O-GLUCOSIDE/CN  
E7 1 PELARGONIDIN 3,5-DIGLUCOSIDE/CN  
E8 1 PELARGONIDIN 3-(6''-MALONYLGLUCOSIDE)/CN  
E9 1 PELARGONIDIN 3-B-D-GLUCOPYRANOSIDE/CN  
E10 1 PELARGONIDIN 3-B-GLUCOSIDE/CN  
E11 1 PELARGONIDIN 3-ARABINOSIDE/CN  
E12 1 PELARGONIDIN 3-GLUCOSIDE/CN

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=> s e3

L2 1 PELARGONIDIN/CN

=> d 12

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN

RN 134-04-3 REGISTRY

ED Entered STN: 16 Nov 1984

CN 1-Benzopyrylium, 3,5,7-trihydroxy-2-(4-hydroxyphenyl)-, chloride (1:1)  
(CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-Benzopyrylium, 3,5,7-trihydroxy-2-(4-hydroxyphenyl)-, chloride (9CI)

CN Flavylium, 3,4',5,7-tetrahydroxy-, chloride (8CI)

CN Pelargonidin (6CI)

OTHER NAMES:

CN 3,4',5,7-Tetrahydroxyflavylium chloride

CN Pelargonidin chloride

CN Pelargonidol chloride

MF C15 H11 O5 . Cl

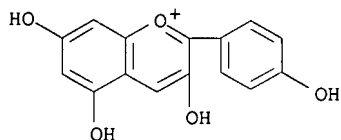
CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOSIS, BIOTECHNO, CA, CABA,  
CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHM, DDFU, DRUGU,  
EMBASE, MRCK\*, NAPRALERT, PROMT, TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

CRN (7690-51-9)



● Cl<sup>-</sup>

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

621 REFERENCES IN FILE CA (1907 TO DATE)

64 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

623 REFERENCES IN FILE CAPLUS (1907 TO DATE)

30 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

15.60

15.81

FILE 'CAPLUS' ENTERED AT 21:24:39 ON 25 SEP 2007

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FILE COVERS 1907 - 25 Sep 2007 VOL 147 ISS 14

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FILE LAST UPDATED: 24 Sep 2007 (20070924/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.  
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<http://www.cas.org/infopolicy.html>

=> s 11

L3 25 L1

=> s 13 and (glucose or diabetes)

431344 GLUCOSE

830 GLUCOSES

431526 GLUCOSE

(GLUCOSE OR GLUCOSES)

130814 DIABETES

L4 6 L3 AND (GLUCOSE OR DIABETES)

=> d bib abs kwic 1-6 14

L4 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:513589 CAPLUS

DN 147:138388

TI Identification of a Flavonol 7-O-Rhamnosyltransferase Gene Determining  
Flavonoid Pattern in Arabidopsis by Transcriptome Coexpression Analysis  
and Reverse Genetics

AU Yonekura-Sakakibara, Keiko; Tohge, Takayuki; Niida, Rie; Saito, Kazuki  
CS RIKEN Plant Science Center, Suehiro-cho 1-7-22, Tsurumi-ku, Yokohama,  
230-0045, Japan

SO Journal of Biological Chemistry (2007), 282(20), 14932-14941

CODEN: JBCHA3; ISSN: 0021-9258

PB American Society for Biochemistry and Molecular Biology

DT Journal

LA English

AB Glycosylation plays a major role in the remarkable chemical diversity of  
flavonoids in plants including Arabidopsis thaliana. The wide diversity  
encoded by the large family-1 glycosyltransferase (UGT) gene family makes  
it difficult to determine the biochem. function of each gene solely from its  
primary sequence. Here we used transcriptome coexpression anal. combined  
with a reverse genetics approach to identify a gene that is prominent in  
determining the flavonoid composition of ARABIDOPSIS: Using transcriptome  
coexpression anal. accessible on the ATTED-II public data base, the  
expression pattern of a UGT gene, UGT89C1, was found to be highly  
correlated with known flavonoid biosynthetic genes. No C-7 rhamnosylated  
flavonols were detected in either of two T-DNA ugt89c1 mutants. This  
specific metabolite deficiency in the mutants was complemented by stable  
transformation with the genomic fragment containing intact UGT89C1.  
Glutathione S-transferase fused recombinant UGT89C1 protein converted  
kaempferol 3-O-glucoside to kaempferol 3-O-glucoside-7-O-rhamnoside and  
recognized 3-O-glycosylated flavonols and UDP-rhamnose as substrates, but  
not flavonol aglycons, 3-O-glycosylated anthocyanins or other UDP-sugars.  
These results show that UGT89C1 is a flavonol 7-O-rhamnosyltransferase.  
The abundance of UGT89C1 transcripts in floral buds was consistent with  
the flavonoid accumulation of C-7 rhamnosylated flavonols in Arabidopsis  
organs. The present study demonstrates that the integration of  
transcriptome coexpression anal. with a reverse genetic approach is a  
versatile tool for understanding a multigene family of a metabolic pathway  
in ARABIDOPSIS.

RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 153-18-4 480-10-4 482-35-9, Quercetin 3-O-glucoside 482-36-0  
522-12-3, Quercetin 3-O-rhamnoside 604-80-8 5041-82-7, Isorhamnetin  
3-O-glucoside 7084-24-4, Cyanidin 3-O-glucoside 17650-84-9  
18719-76-1 38533-30-1 83380-89-6

RL: ANT (Analyte); ANST (Analytical study)

(identification of a flavonol 7-O-rhamnosyltransferase gene determining  
flavonoid pattern in Arabidopsis by transcriptome coexpression anal.  
and reverse genetics)

IT 133-89-1P, UDP-glucose 1955-26-6P, UDP-rhamnose 2616-64-0P,  
UDP-glucuronic acid 2956-16-3P, UDP-galactose

RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified);

BIOL (Biological study); PREP (Preparation); USES (Uses)

(identification of a flavonol 7-O-rhamnosyltransferase gene determining  
flavonoid pattern in Arabidopsis by transcriptome coexpression anal.  
and reverse genetics)

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L4 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2006:1048945 CAPLUS  
 DN 146:80737  
 TI Anthocyanin pigments in strawberry  
 AU Lopes da Silva, Fatima; Escribano-Bailon, Maria Teresa; Perez Alonso, Jose  
 Joaquin; Rivas-Gonzalo, Julian C.; Santos-Buelga, Celestino  
 CS Facultad de Farmacia, Laboratorio de Nutricion y Bromatologia, Universidad  
 de Salamanca, Salamanca, E-37007, Spain  
 SO LWT--Food Science and Technology (2006), Volume Date 2007, 40(2), 374-382  
 CODEN: LSTWB3  
 PB Elsevier Ltd.  
 DT Journal  
 LA English  
 AB The anthocyanin composition was analyzed in strawberry fruits from five  
 different cultivars (cv. Eris, Oso Grande, Carisma, Tudnew and Camarosa).  
 Twenty-five defined anthocyanin pigments were detected, most of them  
 containing Pelargonidin (Pg) as aglycon; some cyanidin (Cy) derivs. were also  
 found. Glucose and rutinose were the usual substituting sugars,  
 although arabinose and rhamnose were also tentatively identified; some  
 minor anthocyanins showed acylation with aliphatic acids. A relevant aspect  
 was the detection of anthocyanin-derived pigments, namely  
 5-carboxypyranopelargonidin-3-glucoside and 4 condensed pigments containing  
 C-C linked anthocyanin (Pg) and flavanol (catechin and afzelechin)  
 residues. Total anthocyanin content ranged between 200 and 600 mg kg<sup>-1</sup>,  
 with Pg 3-gluc constituting 77-90% of the anthocyanins in the strawberry  
 exts. followed by Pg 3-rut (6-11%) and Cy 3-gluc (3-10%). A notable  
 variability was found among the anthocyanin concns. in samples of a same  
 variety and harvest, indicating a strongly influence of the degree of  
 maturity, edaphic-climatic factors and post-harvest storage.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB . . . defined anthocyanin pigments were detected, most of them containing  
 Pelargonidin (Pg) as aglycon; some cyanidin (Cy) derivs. were also found.  
 Glucose and rutinose were the usual substituting sugars, although  
 arabinose and rhamnose were also tentatively identified; some minor  
 anthocyanins showed acylation.

IT 134-04-3D, Pelargonidin, derivs. 134-04-3D, Pelargonidin, disaccharides  
 528-58-5D, Cyanidin, derivs. 7084-24-4, Cyanidin 3-glucoside  
 17334-58-6, Pelargonidin 3,5-diglucoside 18466-51-8, Pelargonidin  
 3-glucoside 18466-51-8D, Pelargonidin 3-glucoside, acetates  
 18719-76-1, Cyanidin 3-rutinoside 33569-08-3, Pelargonidin 3-arabinoside  
 33569-08-3D, succinates 33978-17-5, Pelargonidin 3-rutinoside  
 34425-22-4, Pelargonidin 3-galactoside 38533-30-1D, malonates  
 56190-03-5D, malonates 94977-38-5 104055-86-9 104056-23-7  
 138590-96-2 216692-08-9 680227-23-0 753008-64-9 753008-65-0  
 753008-66-1 753008-67-2 781626-03-7  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (anthocyanin pigments in strawberry cultivars)

L4 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2005:426452 CAPLUS  
 DN 142:441885  
 TI Glucose absorption inhibitor and process for producing the same  
 IN Aoki, Hitoshi; Hanamura, Takayuki; Mayama, Chisato; Hirayama, Yasushi;  
 Shimizu, Makoto  
 PA Nichirei Corporation, Japan  
 SO PCT Int. Appl., 17 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005044290	A1	20050519	WO 2004-JP16218	20041101
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,			

NE, SN, TD, TG  
 JP 2005139093 A 20050602 JP 2003-375323 20031105  
 EP 1685822 A1 20060802 EP 2004-799424 20041101  
 R: DE, ES, FR, GB, IT  
 US 2007082077 A1 20070412 US 2006-578250 20060504  
 PRAI JP 2003-375323 A 20031105  
 WO 2004-JP16218 W 20041101

AB A glucose absorption inhibitor and a process for producing the inhibitor. The glucose absorption inhibitor contains as an active ingredient a substance which is derived from acerola and has glucose absorption inhibitory activity.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Glucose absorption inhibitor and process for producing the same

AB A glucose absorption inhibitor and a process for producing the inhibitor. The glucose absorption inhibitor contains as an active ingredient a substance which is derived from acerola and has glucose absorption inhibitory activity.

ST acerola polyphenol anthocyanin intestine glucose absorption inhibitor

IT Antidiabetic agents

Diabetes mellitus

Health food

Human

Intestine

Malpighia

(acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

IT Anthocyanins

RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

IT Phenols, biological studies

RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(polyphenols, nonpolymeric; acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

IT Biological transport

(uptake; acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

IT 50-99-7, D-Glucose, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study) (acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

IT 38533-30-1P, Cyanidin-3-rhamnoside 56190-03-5P,

Pelargonidin-3-rhamnoside

RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

L4 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:275690 CAPLUS

DN 142:341828

TI Hypoglycemic agents and AGE (advanced glycation endproducts) formation inhibitors from acerola, their medical use, and manufacture

IN Hanamura, Takayuki, Hagiwara, Toshihiko, Kawagishi, Hirokazu

PA Nichirei Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005082509	A	20050331	JP 2003-314207	20030905
PRAI	JP 2003-314207		20030905		

AB Title agents and inhibitors, useful for prophylactic and therapeutic treatment of diabetes mellitus or diabetic complications, are manufactured by pulverization of acerola fruits, extraction, and optionally purification



Thus, cyanidin-3-rhamnoside, pelargonidin-3-rhamnoside, and quercitrin extracted from acerola fruits inhibited maltase and sucrase.

AB Title agents and inhibitors, useful for prophylactic and therapeutic treatment of diabetes mellitus or diabetic complications, are manufactured by pulverization of acerola fruits, extraction, and optionally purification. Thus, cyanidin-3-rhamnoside, pelargonidin-3-rhamnoside, and quercitrin.

IT Antidiabetic agents

Diabetes mellitus

Malpighia

(hypoglycemic agents and AGE formation inhibitors containing acerola polyphenols)

IT 522-12-3P, Quercitrin 38533-30-1P, Cyanidin-3-rhamnoside

56190-03-5P, Pelargonidin-3-rhamnoside

RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(hypoglycemic agents and AGE formation inhibitors containing acerola polyphenols)

L4 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:233432 CAPLUS

DN 142:335271

TI Structural and functional characterization of polyphenols isolated from acerola (Malpighia emarginata DC.) fruit

AU Manamura, Takayuki; Hagiwara, Toshihiko; Kawagishi, Hirokazu

CS Research and Development Division, Proc. Foods Company, Nichirei Corporation, Chiba, 261-8545, Japan

SO Bioscience, Biotechnology, and Biochemistry (2005), 69(2), 280-286

CODEN: BBBIEJ; ISSN: 0916-8451

PB Japan Society for Bioscience, Biotechnology, and Agrochemistry

DT Journal

LA English

AB Two anthocyanins, cyanidin-3- $\alpha$ -O-rhamnoside (C3R) and pelargonidin-3- $\alpha$ -O-rhamnoside (P3R), and quercitrin (quercetin-3- $\alpha$ -O-rhamnoside), were isolated from acerola (Malpighia emarginata DC.) fruit. These polyphenols were evaluated based on the functional properties associated with diabetes mellitus or its complications, i.e., on the radical scavenging activity and the inhibitory effect on both  $\alpha$ -glucosidase and advanced glycation end product (AGE) formation. C3R and quercitrin revealed strong radical scavenging activity. While the inhibitory profiles of isolated polyphenols except quercitrin towards  $\alpha$ -glucosidase activity were low, all polyphenols strongly inhibited AGE formation.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB . . . (quercetin-3- $\alpha$ -O-rhamnoside), were isolated from acerola (Malpighia emarginata DC.) fruit. These polyphenols were evaluated based on the functional properties associated with diabetes mellitus or its complications, i.e., on the radical scavenging activity and the inhibitory effect on both  $\alpha$ -glucosidase and advanced glycation.

IT 522-12-3P 38533-30-1P 56190-03-5P

RL: BSU (Biological study, unclassified); PRP (Properties); PUR

(Purification or recovery); BIOL (Biological study); PREP (Preparation)

(Structural and functional characterization of polyphenols from acerola fruit)

L4 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1963:422016 CAPLUS

DN 59:22016

OREF 59:4025g-h,4026a

TI Plant polyphenols. IX. The glycosidic pattern of anthocyanin pigments

AU Harborn, J. B.

CS John Innes Inst., Hertford, UK

SO Phytochemistry (Elsevier) (1963), 2, 85-97

CODEN: PYTCAS; ISSN: 0031-9422

DT Journal

LA Unavailable

AB cf. CA 57, 15513i. Twenty-three new anthocyanins have been identified and their R<sub>f</sub> values and spectral properties recorded. They are the 3-galactoside of pelargonidin (I); the 3-rhamnosides of peonidin (II), petunidin (III), and malvidin (IV); the 3-sambubioside of I; the 3-xylosylgalactosides of I, cyanidin (V), and II; the 3-sophorosides of I and V; the 5-glucoside-3-sophorosides of I and V; the 7-glucoside-3-

*or listed*

sophoroside of I; the 5-glucoside-3-rhamno- sides of I, II, III, IV, V, and delphinidin; the 5-glucoside-3sambubiosides of I and V; the 3,5-diglucoside of rosinidin; and the 5-glucoside of luteolinidin. They occur variously, usually in the flowers, in spp. of Brassica, Fagus, Gesneria, Lathyrus, Matthiola, Papaver, Primula, Raphanus, and Streptocarpus. Known anthocyanins have been identified in these and other genera. As a result of this survey, previous structures for pigments of corn poppy, garden stock, and red cabbage have been revised.

IT 910906-03-5, D-Glucose, 2-O- $\beta$ -D-xylofuranosyl-  
(derivs)  
IT 132-37-6P, Peonin 2611-67-8P, Cyanin 7084-24-4P, Chrysanthemin  
7228-78-6P, Enin 13089-93-5P, 1-Benzopyrylium, 2-(3,4-dihydroxyphenyl)-5-  
( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-, chloride 16727-02-9P,  
1-Benzopyrylium, 2-(3,4-dihydroxyphenyl)-3-[(2-O- $\beta$ -D-glucopyranosyl-  
 $\beta$ -D-glucopyranosyl)oxy]-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-,  
chloride 16727-30-3P, Malvin 17334-58-6P, Pelargonin 17670-06-3P,  
Delphin 18376-31-3P, 1-Benzopyrylium, 2-(3,4-dihydroxyphenyl)-3-[(2-O-  
 $\beta$ -D-glucopyranosyl- $\beta$ -D-glucopyranosyl)oxy]-5,7-dihydroxy-,  
chloride 18466-51-8P, Callistephin 18719-76-1P, Keracyanin  
20016-74-4P, Rosinidin, 3,5-diglucoside 27661-36-5P, Idein  
28148-89-2P, 1-Benzopyrylium, 3-( $\beta$ -D-galactopyranosyloxy)-5,7-  
dihydroxy-2-(4-hydroxy-3-methoxyphenyl)-, chloride 30104-49-5P,  
1-Benzopyrylium, 5,7-dihydroxy-2-(4-hydroxyphenyl)-3-[(2-O- $\beta$ -D-  
xylofuranosyl- $\beta$ -D-glucopyranosyl)oxy]-, chloride 32221-58-2P,  
1-Benzopyrylium, 3,5-bis( $\beta$ -D-glucopyranosyloxy)-2-(4-hydroxy-3,5-  
dimethoxyphenyl)-7-methoxy-, chloride 34425-22-4P, 1-Benzopyrylium,  
3-( $\beta$ -D-galactopyranosyloxy)-5,7-dihydroxy-2-(4-hydroxyphenyl)-,  
chloride 38533-30-1P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-  
mannopyranosyl)oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-, chloride  
53859-11-3P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-5-  
( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-2-(4-hydroxy-3-methoxyphenyl)-,  
chloride 53925-28-3P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-  
mannopyranosyl)oxy]-5,7-dihydroxy-2-(4-hydroxy-3,5-dimethoxyphenyl)-,  
chloride 53925-29-4P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-  
mannopyranosyl)oxy]-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-2-(4-hydroxy-  
3,5-dimethoxyphenyl)-, chloride 53925-30-7P, 1-Benzopyrylium,  
3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-2-(3,4-dihydroxy-5-  
methoxyphenyl)-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-, chloride  
53925-31-8P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-5-  
( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-2-(3,4,5-trihydroxyphenyl)-,  
chloride 53925-32-9P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-  
mannopyranosyl)oxy]-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-2-(4-  
hydroxyphenyl)-, chloride 55821-57-3P, 1-Benzopyrylium,  
2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-3-[(O- $\beta$ -D-xylopyranosyl- $\beta$ -  
D-galactopyranosyl)oxy]-, chloride 56552-43-3P, 1-Benzopyrylium,  
2-(3,4-dihydroxy-5-methoxyphenyl)-3,5-bis( $\beta$ -D-glucopyranosyloxy)-7-  
hydroxy-, chloride 72551-79-2P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-  
mannopyranosyl)oxy]-5,7-dihydroxy-2-(4-hydroxy-3-methoxyphenyl)-, chloride  
86279-08-5P, 1-Benzopyrylium, 3-[(2-O- $\beta$ -D-glucopyranosyl- $\beta$ -D-  
glucopyranosyl)oxy]-7-( $\beta$ -D-glucopyranosyloxy)-5-hydroxy-2-(4-  
hydroxyphenyl)-, chloride 101203-52-5P, 1-Benzopyrylium,  
3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-2-(3,4-dihydroxy-5-  
methoxyphenyl)-5,7-dihydroxy-, chloride 102521-86-8P, 1-Benzopyrylium,  
3,7-bis( $\beta$ -D-glucopyranosyloxy)-5-hydroxy-2-(4-hydroxyphenyl)-,  
chloride 103064-79-5P, 1-Benzopyrylium, 5,7-dihydroxy-2-(4-  
hydroxyphenyl)-3-[(O- $\beta$ -D-xylopyranosyl- $\beta$ -D-glucopyranosyl)oxy]-,  
chloride 103102-91-6P, 3-[(6-O- $\beta$ -D-Glucopyranosyl-D-glucosyl)oxy]-  
4',5,7-trihydroxyflavylium chloride 103189-13-5P, 4',5,7-Trihydroxy-3-  
[(6-O- $\beta$ -L-rhamnosyl-D-glucosyl)oxy]flavylium chloride 103189-14-6P,  
1-Benzopyrylium, 3-[(2-O- $\beta$ -D-glucopyranosyl-D-glucopyranosyl)oxy]-  
5,7-dihydroxy-2-(4-hydroxyphenyl)-, chloride 105087-47-6P,  
5-(D-Glucosyloxy)-4',7-dihydroxy-3-[(6-O- $\beta$ -L-rhamnosyl-D-  
glucosyl)oxy]flavylium chloride 106198-07-6P, 5-(D-Glucosyloxy)-4',7-  
dihydroxy-3-[(2-O- $\beta$ -D-xylofuranosyl-D-glucosyl)oxy]flavylium chloride  
106249-11-0P, 5-(D-Glucosyloxy)-4',7-dihydroxy-3',5'-dimethoxy-3-[(6-O-  
 $\beta$ -L-rhamnosyl-D-glucosyl)oxy]flavylium chloride 155380-00-0P,  
1-Benzopyrylium, 5,7-dihydroxy-2-(4-hydroxy-3-methoxyphenyl)-3-[(2-O-  
 $\beta$ -D-xylopyranosyl- $\beta$ -D-galactopyranosyl)oxy]-, chloride  
RL: PREP (Preparation)  
(preparation of)

=> d his

(FILE 'HOME' ENTERED AT 21:21:51 ON 25 SEP 2007)

McIntosh

FILE 'REGISTRY' ENTERED AT 21:22:16 ON 25 SEP 2007

E CYANIDIN-3-RHAMNOSIDE/CN

E CYANIDIN 3-RHAMNOSIDE/CN

L1 1 S E3

E PELARGONIDIN 3-RHAMNOSIDE/CN

E PELARGONIDIN-3-RHAMNOSIDE/CN

E PELARGONIDIN/CN

L2 1 S E3

FILE 'CAPLUS' ENTERED AT 21:24:39 ON 25 SEP 2007

L3 25 S L1

E DIABETES+ALL/CT

L4 6 S L3 AND (GLUCOSE OR DIABETES)

=&gt; d bib abs kwic 1-25 13

L3 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:911577 CAPLUS

DN 147:242711

TI Skin-lightening agent containing polyphenol compound

IN Uchida, Eriko; Hanamura, Takayuki; Mayama, Chisato; Aoki, Hitoshi

PA Nichirei Foods Inc., Japan

SO U.S. Pat. Appl. Publ., 16pp., Cont.-in-part of Appl. No. PCT/JP05/015009.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2007189997	A1	20070816	US 2007-708021	20070220
	WO 2006019114	A1	20060223	WO 2005-JP15009	20050817
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI	JP 2004-238702	A	20040818		
	WO 2005-JP15009	A2	20050817		
AB	This invention relates to a method for inhibiting melanin formation in a subject comprising administering an effective amount of an Acerola-derived polyphenol compound, an Acerola polyphenol fraction, or the other polyphenol compound to a subject. This method comprises lightening the subject's skin by the inhibition of melanin formation. This method also comprises administering synergistically effective amts. of an Acerola-derived polyphenol compound, an Acerola polyphenol fraction, or the other polyphenol compound in combination with ascorbic acid or an ascorbic acid derivative to a subject.				
IT	117-39-5, Quercetin 482-36-0, Hyperoside 522-12-3, Quercetin-3-rhamnoside 21637-25-2, Isoquercitrin 29838-67-3, Astilbin 38533-30-1, Cyanidin-3-rhamnoside 56190-03-5, Pelargonidin-3-rhamnoside				
RL:	BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)				
	(skin-lightening agent containing polyphenol compound)				

L3 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:513589 CAPLUS

DN 147:138388

TI Identification of a Flavonol 7-O-Rhamnosyltransferase Gene Determining Flavonoid Pattern in Arabidopsis by Transcriptome Coexpression Analysis and Reverse Genetics

AU Yonekura-Sakakibara, Keiko; Tohge, Takayuki; Niida, Rie; Saito, Kazuki

CS RIKEN Plant Science Center, Suehiro-cho 1-7-22, Tsurumi-ku, Yokohama, 230-0045, Japan

SO Journal of Biological Chemistry (2007), 282(20), 14932-14941

CODEN: JBCHA3; ISSN: 0021-9258

PB American Society for Biochemistry and Molecular Biology

DT Journal  
LA English

AB Glycosylation plays a major role in the remarkable chemical diversity of flavonoids in plants including *Arabidopsis thaliana*. The wide diversity encoded by the large family-1 glycosyltransferase (UGT) gene family makes it difficult to determine the biochem. function of each gene solely from its primary sequence. Here we used transcriptome coexpression anal. combined with a reverse genetics approach to identify a gene that is prominent in determining the flavonoid composition of *ARABIDOPSIS*: Using transcriptome coexpression anal. accessible on the ATTED-II public data base, the expression pattern of a UGT gene, UGT89C1, was found to be highly correlated with known flavonoid biosynthetic genes. No C-7 rhamnosylated flavonols were detected in either of two T-DNA *ugt89c1* mutants. This specific metabolite deficiency in the mutants was complemented by stable transformation with the genomic fragment containing intact UGT89C1. Glutathione S-transferase fused recombinant UGT89C1 protein converted kaempferol 3-O-glucoside to kaempferol 3-O-glucoside-7-O-rhamnoside and recognized 3-O-glycosylated flavonols and UDP-rhamnose as substrates, but not flavonol aglycons, 3-O-glycosylated anthocyanins or other UDP-sugars. These results show that UGT89C1 is a flavonol 7-O-rhamnosyltransferase. The abundance of UGT89C1 transcripts in floral buds was consistent with the flavonoid accumulation of C-7 rhamnosylated flavonols in *Arabidopsis* organs. The present study demonstrates that the integration of transcriptome coexpression anal. with a reverse genetic approach is a versatile tool for understanding a multigene family of a metabolic pathway in *ARABIDOPSIS*.

RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 153-18-4 480-10-4 482-35-9, Quercetin 3-O-glucoside 482-36-0  
522-12-3, Quercetin 3-O-rhamnoside 604-80-8 5041-82-7, Isorhamnetin  
3-O-glucoside 7084-24-4, Cyanidin 3-O-glucoside 17650-84-9  
18719-76-1 38533-30-1 83380-89-6

RL: ANT (Analyte); ANST (Analytical study)

(identification of a flavonol 7-O-rhamnosyltransferase gene determining  
flavonoid pattern in *Arabidopsis* by transcriptome coexpression anal.  
and reverse genetics)

L3 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:251976 CAPLUS

DN 146:273178

TI Lipid absorption inhibitors, lipase inhibitors, and foods containing  
acerola leaves or their preparations

IN Aoki, Hitoshi; Hanamura, Takayuki; Mayama, Chisato

PA Nichirei Foods Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 9pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2007055980	A	20070308	JP 2005-246325	20050826
PRAI	JP 2005-246325		20050826		

AB Title inhibitors and foods are claimed. Thus, boiling water extract of acerola leaves at 1 mg/mL inhibited porcine pancreatic lipase activity by .apprx.50% and lowered plasma triglyceride level in cotton seed oil-fed mice.

IT 38533-30-1, Cyanidin-3-rhamnoside 56190-03-5,  
Pelargonidin-3-rhamnoside

RL: REM (Removal or disposal); PROC (Process)

(removal of; lipase inhibitors containing boiling water extract of acerola  
leaves for inhibition of lipid absorption and decreasing body weight)

L3 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:210743 CAPLUS

DN 146:499678

TI The high ascorbic acid content is the main cause of the low stability of  
anthocyanin extracts from acerola

AU De Rosso, Veridiana V.; Mercadante, Adriana Z.

CS Department of Food Science, Faculty of Food Engineering, State University  
of Campinas (UNICAMP), Sao Paulo, CEP 13083-862, Brazil

SO Food Chemistry (2007), 103(3), 935-943

CODEN: FOCHDJ; ISSN: 0308-8146

PB Elsevier B.V.

DT Journal

LA English

AB Acerola is considered to be one of the best natural sources of ascorbic acid (AA) and, for this reason, the influence of this component on the stability of anthocyanins from acerola exts. was determined and compared to those from acai, which have no detectable AA. The addition of three different levels of AA to the solution of acai anthocyanins resulted in a 110-fold increase in the degradation rate (kobs) at the highest fortification level (276 mg/mL). The fact that the flavonoid concentration of the acai anthocyanin extract was 10 times higher than that of the acerola was probably responsible for the three times higher stability of the AA-fortified acai system compared to the acerola system, both at the same AA concentration and similar total polyphenol levels. The higher the level of AA addition to acai anthocyanin solns., the greater was the color fading, indicated by increase of L\* and decrease of a\* and C\* values.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 38533-30-1, Cyanidin-3-rhamnoside 56190-03-5,  
Pelargonidin-3-rhamnoside 936479-47-9  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(high ascorbic acid content related to anthocyanin instability in  
acerola exts. compared with acai)

L3 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:1048945 CAPLUS

DN 146:80737

TI Anthocyanin pigments in strawberry

AU Lopes da Silva, Fatima; Escribano-Bailon, Maria Teresa; Perez Alonso, Jose  
Joaquin; Rivas-Gonzalo, Julian C.; Santos-Buelga, Celestino

CS Facultad de Farmacia, Laboratorio de Nutricion y Bromatologia, Universidad  
de Salamanca, Salamanca, E-37007, Spain

SO LWT--Food Science and Technology (2006), Volume Date 2007, 40(2), 374-382  
CODEN: LSTWB3

PB Elsevier Ltd.

DT Journal

LA English

AB The anthocyanin composition was analyzed in strawberry fruits from five different cultivars (cv. Eris, Oso Grande, Carisma, Tudnew and Camarosa). Twenty-five defined anthocyanin pigments were detected, most of them containing Pelargonidin (Pg) as aglycon; some cyanidin (Cy) derivs. were also found. Glucose and rutinose were the usual substituting sugars, although arabinose and rhamnose were also tentatively identified; some minor anthocyanins showed acylation with aliphatic acids. A relevant aspect was the detection of anthocyanin-derived pigments, namely 5-carboxypyranopelargonidin-3-glucoside and 4 condensed pigments containing C-C linked anthocyanin (Pg) and flavanol (catechin and afzelechin) residues. Total anthocyanin content ranged between 200 and 600 mg kg<sup>-1</sup>, with Pg 3-gluc constituting 77-90% of the anthocyanins in the strawberry exts. followed by Pg 3-rut (6-11%) and Cy 3-gluc (3-10%). A notable variability was found among the anthocyanin concns. in samples of a same variety and harvest, indicating a strongly influence of the degree of maturity, edaphic-climatic factors and post-harvest storage.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 134-04-3D, Pelargonidin, derivs. 134-04-3D, Pelargonidin, disaccharides  
528-58-5D, Cyanidin, derivs. 7084-24-4, Cyanidin 3-glucoside  
17334-58-6, Pelargonidin 3,5-diglucoside 18466-51-8, Pelargonidin  
3-glucoside 18466-51-8D, Pelargonidin 3-glucoside, acetates  
18719-76-1, Cyanidin 3-rutinoside 33569-08-3, Pelargonidin 3-arabinoside  
33569-08-3D, succinates 33978-17-5, Pelargonidin 3-rutinoside  
34425-22-4, Pelargonidin 3-galactoside 38533-30-1D, malonates  
56190-03-5D, malonates 94977-38-5 104055-86-9 104056-23-7  
138590-96-2 216692-08-9 680227-23-0 753008-64-9 753008-65-0  
753008-66-1 753008-67-2 781626-03-7  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(anthocyanin pigments in strawberry cultivars)

L3 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:167977 CAPLUS

DN 144:239246

TI Skin-lightening agent containing polyphenol compounds

IN Uchida, Eriko; Hanamura, Takayuki; Mayama, Chisato; Aoki, Hitoshi

PA Nichirei Foods Inc., Japan

SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DT Patent

LA Japanese  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006019114	A1	20060223	WO 2005-JP15009	20050817
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	EP 1787624	A1	20070523	EP 2005-780368	20050817
	R: DE, ES, FR, GB, IT				
	US 2007189997	A1	20070816	US 2007-708021	20070220
PRAI	JP 2004-238702	A	20040818		
	WO 2005-JP15009	W	20050817		

AB Disclosed is a skin-lightening agent sufficiently effective in lightening the skin. Also provided is a melanin generation inhibitor which contains as an active ingredient a polyphenol compound derived from Acerola, an Acerola polyphenol fraction, or another polyphenol compound, and which may optionally further contain ascorbic acid or an ascorbic acid derivative as an active ingredient. A cosmetic composition, food or beverage composition, or medicinal composition is further provided which contains the tyrosinase inhibitor. For example, fruits of Acerola were extracted with TFA/methanol solvent. Cyanidin 3-rhamnoside and pelargonidin 3-rhamnoside were isolated from the extract and in vitro IC50 values for inhibiting activities of tyrosinase were 33 and 5.6  $\mu$ M, resp.

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 38533-30-1P, Cyanidin 3-rhamnoside 56190-03-5P, Pelargonidin 3-rhamnoside  
RL: COS (Cosmetic use); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(skin-lightening agent containing polyphenols from Acerola exts.)

L3 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2005:426452 CAPLUS  
DN 142:441885  
TI Glucose absorption inhibitor and process for producing the same  
IN Aoki, Hitoshi; Hanamura, Takayuki; Mayama, Chisato; Hirayama, Yasushi; Shimizu, Makoto  
PA Nichirei Corporation, Japan  
SO PCT Int. Appl., 17 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005044290	A1	20050519	WO 2004-JP16218	20041101
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2005139093	A	20050602	JP 2003-375323	20031105
	EP 1685822	A1	20060802	EP 2004-799424	20041101
	R: DE, ES, FR, GB, IT				
	US 2007082077	A1	20070412	US 2006-578250	20060504
PRAI	JP 2003-375323	A	20031105		
	WO 2004-JP16218	W	20041101		

AB A glucose absorption inhibitor and a process for producing the inhibitor.

The glucose absorption inhibitor contains as an active ingredient a substance which is derived from acerola and has glucose absorption inhibitory activity.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 38533-30-1P, Cyanidin-3-rhamnoside 56190-03-5P,  
Pelargonidin-3-rhamnoside  
RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(acerola polyphenols and anthocyanins as glucose absorption inhibitors  
and process for producing the same)

L3 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:351440 CAPLUS

DN 143:96211

TI Chemopreventive potential of wild lowbush blueberry fruits in multiple  
stages of carcinogenesis

AU Kraft, Tristan F. Burns; Schmidt, Barbara M.; Yousef, G. G.; Knight,  
Christopher T. G.; Cuendet, Muriel; Kang, Young-Hwa; Pezzuto, John M.;  
Seigler, David S.; Lila, Mary Ann

CS Div. of Nutritional Sciences, Univ. of Illinois at Urbana-Champaign,  
Urbana, IL, 61801, USA

SO Journal of Food Science (2005), 70(3), S159-S166  
CODEN: JFDSA2; ISSN: 0022-1147

PB Institute of Food Technologists

DT Journal

LA English

AB Wild lowbush blueberry fruit extract was fractionated using vacuum chromatog.  
and analyzed for chemopreventive potential using bioassays that test the  
ability of compds. to inhibit the initiation, promotion, and progression  
stages of carcinogenesis. A fraction containing phytosterols was active  
against the initiation stage (quinone reductase assay). However, more  
polar compds. were inhibitors of later stages of carcinogenesis; a  
fraction containing flavan-3-ols and fractions containing mainly anthocyanins,  
phenolic acids, flavan-3-ols, and some proanthocyanidin dimers  
demonstrated activity against the promotion stage (cyclooxygenase and  
ornithine decarboxylase assays, resp.), and a proanthocyanidin-rich  
fraction demonstrated antiproliferation activity (inhibition of cancerous  
murine hepatocyte proliferation is associated with the progression stage).  
These results indicate that lowbush blueberries contain a range of compds.  
that have bioactivity against multiple stages of carcinogenesis, and  
different types of phenolic compds. are active at different stages.

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 117-39-5, Quercetin 154-23-4, Catechin 327-97-9, Chlorogenic acid  
474-62-4, Campesterol 490-46-0, Epicatechin 7084-24-4,  
Cyanidin-3-O-glucoside 7400-08-0, p-Coumaric acid 20315-25-7,  
Procyanidin B1 27214-72-8, Cyanidin-3-O-arabinoside 38533-30-1  
, Cyanidin-3-rhamnoside

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(chemopreventive potential of wild lowbush blueberry fruits in multiple  
stages of carcinogenesis)

L3 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:275690 CAPLUS

DN 142:341828

TI Hypoglycemic agents and AGE (advanced glycation endproducts) formation  
inhibitors from acerola, their medical use, and manufacture

IN Hanamura, Takayuki; Hagiwara, Toshihiko; Kawagishi, Hirokazu

PA Nichirei Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005082509	A	20050331	JP 2003-314207	20030905
PRAI	JP 2003-314207		20030905		


AB Title agents and inhibitors, useful for prophylactic and therapeutic  
treatment of diabetes mellitus or diabetic complications, are manufactured by  
pulverization of acerola fruits, extraction, and optionally purification. Thus,  
cyanidin-3-rhamnoside, pelargonidin-3-rhamnoside, and quercitrin extracted  
from acerola fruits inhibited maltase and sucrase.

IT 522-12-3P, Quercitrin 38533-30-1P, Cyanidin-3-rhamnoside  
56190-03-5P, Pelargonidin-3-rhamnoside  
RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(hypoglycemic agents and AGE formation inhibitors containing acerola  
polyphenols)

L3 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2005:233432 CAPLUS  
DN 142:335271  
TI Structural and functional characterization of polyphenols isolated from  
acerola (*Malpighia emarginata* DC.) fruit  
AU Hanamura, Takayuki; Nagiawara, Toshihiko; Kawagishi, Hirokazu  
CS ~~Research and Development Division, Proc. Foods Company, Nichirei~~  
Corporation, Chiba, 261-8545, Japan  
SO Bioscience, Biotechnology, and Biochemistry (2005), 69(2), 280-286  
CODEN: BBBIEJ; ISSN: 0916-8451  
PB Japan Society for Bioscience, Biotechnology, and Agrochemistry  
DT Journal  
LA English  
AB Two anthocyanins, cyanidin-3- $\alpha$ -O-rhamnoside (C3R) and  
pelargonidin-3- $\alpha$ -O-rhamnoside (P3R), and quercitrin  
(quercetin-3- $\alpha$ -O-rhamnoside), were isolated from acerola (*Malpighia*  
*emarginata* DC.) fruit. These polyphenols were evaluated based on the  
functional properties associated with diabetes mellitus or its complications,  
i.e., on the radical scavenging activity and the inhibitory effect on both  
 $\alpha$ -glucosidase and advanced glycation end product (AGE) formation.  
C3R and quercitrin revealed strong radical scavenging activity. While the  
inhibitory profiles of isolated polyphenols except quercitrin towards  
 $\alpha$ -glucosidase activity were low, all polyphenols strongly inhibited  
AGE formation.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 522-12-3P 38533-30-1P 56190-03-5P  
RL: BSU (Biological study, unclassified); PRP (Properties); PUR  
(Purification or recovery); BIOL (Biological study); PREP (Preparation)  
(Structural and functional characterization of polyphenols from acerola  
fruit)

L3 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2002:204035 CAPLUS  
DN 137:60260  
TI Phenolic compounds from *Hypericum perforatum*  
AU Jurgenziernk, Guido; Nahrstedt, Adolf  
CS Institute of Pharmaceutical Biology and Phytochemistry, Westfälische  
Wilhelms-University of Münster, Münster, 48149, Germany  
SO  Planta Medica (2002), 68(1), 88-91  
CODEN: PLMEAA; ISSN: 0032-0943  
PB Georg Thieme Verlag  
DT Journal  
LA English  
AB During a re-investigation of phenolic compds. from the dried crude drug  
material of St. John's wort (*Hypericum perforatum* L.) 22 phenolic compds.  
were detected by HPLC; 14 of them were quantified using the same system.  
Twelve phenolic compds. were isolated from the plant material and their  
structures identified mainly by spectroscopic methods, among them  
quercetin-3-O-(2''-O-acetyl)- $\beta$ -D-galactoside as a new natural  
product. Cryptochlorogenic acid, protocatechuic acid,  
3-O-[Z]-p-coumaroylquinic acid, isoorientin, cyanidin-3-O- $\alpha$ -L-  
rhamnoside, and astilbin were obtained for the first time from this  
source: the earlier suspected neochlorogenic acid, 3-O-[E]-p-  
coumaroylquinic acid, mangiferin, miquelianin and guaijaverin were  
confirmed.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 99-50-3P, Protocatechuic acid 117-39-5P, Quercetin 153-18-4P, Rutin  
480-37-5P, Pinocembrin-7-methyl ether 482-36-0P, Hyperoside 522-12-3P,  
Quercitrin 548-04-9P, Hypericin 905-99-7P, Cryptochlorogenic acid  
906-33-2P, Neochlorogenic acid 1617-53-4P, AmentoFlavone 4261-42-1P,  
Isoorientin 4773-96-0P, Mangiferin 5746-55-4P 11079-53-1P,  
Hyperforin 21637-25-2P, Isoquercitrin 22255-13-6P, Guaijaverin  
22688-79-5P, Miquelianin 29838-67-3P, Astilbin 38533-30-1P  
55954-61-5P, Pseudohypericin 101140-06-1P 185502-68-5P 439266-62-3P  
RL: NPO (Natural product occurrence); PUR (Purification or recovery); BIOL

Printed



(Biological study); OCCU (Occurrence); PREP (Preparation)  
(phenolic compds. from Hypericum perforatum)

- L3 ANSWER 12 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1997:303726 CAPLUS  
DN 126:316637  
TI Analysis of molecular structure of black rice pigment  
AU Zhong, Liyu; Hu, Qiulin  
CS Wuxi University Light Industry, Wuxi, 214036, Peop. Rep. China  
SO Zhongguo Liangyou Xuebao (1996), 11(6), 26-35  
CODEN: ZLXUFO; ISSN: 1003-0174  
PB Zhongguo Liangyou Xuehui  
DT Journal  
LA Chinese  
AB Black-food is famous for rich in nutrition. To develop the utilization of the natural black-pigment, methods, including PC, GC, UV-Spectrophotograph etc., were studied to analyze the mol. structure of the pigment. The results showed that five water-soluble anthocyanins were found in the pigment of 91-53 black-rice, in which the two main anthocyanins were cyanidin-3-rhamnoside and peonidin-3-arabinoside. The pigment was rose-red. It can be used as a natural healthy pigment-additive.  
IT 27214-74-0, Peonidin-3-arabinoside 38533-30-1, Cyanidin-3-rhamnoside  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
(anal. of mol. structure of black rice pigment)
- L3 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1996:366150 CAPLUS  
DN 125:36277  
TI Recovery of anthocyanins from processing residues of pigmented oranges  
AU Calvarano, Maria; Postorino, Enrico; Calvarano, Ignazio; Giofriddo, Francesco  
CS Italy  
SO Essenze, Derivati Agrumari (1995), 65(4), 557-566  
CODEN: EDAGAH; ISSN: 0014-0902  
PB Stazione Sperimentale per l'Industria delle Essenze e dei Derivati Agrumari  
DT Journal  
LA Italian  
AB Anthocyanins were recovered from orange pulp residues from juice extraction, comprising about 5% of fruit, using a pilot scale installation with sequential membrane ultrafiltration and absorption on a resin-packed column. The ultrafiltration module has a membrane surface of 0.37 m<sup>2</sup> and the resin is Amberlite XAD 16. The pulp contains large amts. of anthocyanin-rich juice and is first treated in 1:1 EtOH-water containing 2% citric acid, under stirring for 20 min., for two successive extns. The liquid phase is filtered and the alc. is removed by distillation in a rotovap at 50°, then the aqueous phase is fed to the resin column where the anthocyanins absorb and are eluted with EtOH-water. After removal of solvents, the anthocyanins are obtained as a powder, and the recovery efficiency is 53%. There are significant losses, attributed to non-extractable residues retained by the pulp, losses during EtOH distillation, product retained by the resin, and losses in final processing. The main components in the fairly pure product are cyanidin-3-glucoside and cyanidin-3-rhamnoside. The eluent contains other useful products and can be a good source of monosaccharides. The products may be useful as chemical feedstocks, and for therapeutic formulations.  
IT 7084-24-4P, Cyanidin-3-glucoside 38533-30-1P, Cyanidin-3-rhamnoside  
RL: PUR (Purification or recovery); PREP (Preparation)  
(recovery of anthocyanins from residues of juice extraction of pigmented oranges by extraction/ultrafiltration/resin absorption)
- L3 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1982:3687 CAPLUS  
DN 96:3687  
TI Anthocyanins in Salvia - their significance in species relationship and evolution  
AU Haque, M. S.; Ghoshal, D. N.; Ghoshal, K. K.  
CS Dep. Genet. Plant Breed., BCKVV, Kalyani, India  
SO Proceedings of the Indian National Science Academy, Part B: Biological Sciences (1981), 47(2), 204-9  
CODEN: PIBSBB; ISSN: 0073-6600

10/578,250

DT Journal

LA English

AB The species relation in 10 species and varieties of *Salvia* was studied on the basis of anthocyanin pigments distribution pattern. The identified pigments fall under 3 groups. All red, scarlet, and pink-flowered varieties contained pelargonidin, all blue-flowered varieties contained delphinidin, and amethyst- and grape-violet-colored varieties contained cyanidin derivs. Glycoside 3-rhamnoside occurred frequently in most of the species. The flower color of F1 intervarietal hybrid of *S. coccinea* was the same as that of one of its parents. In both the parents and their hybrid the pigment identified was pelargonidin 3-rhamnoside. *S. coccinea* was most closely related to *S. splendens* var Fireball. All of these species and varieties contained pelargonidin as their principal anthocyanidin. Two other varieties of *S. splendens*, e.g., amethyst and grape-violet, may be related to *S. coccinea* and *S. grahamii*, as they also contain pelargonidin apart from having cyanidin as their main pigment. Three other species, i.e., *S. farinacea*, *S. pratensis*, and *S. hispanica*, may be closely related to one another due to having delphinidin as their main pigment. While considering the evolutionary aspect, it is assumed that the blue-flowered species are the most primitive, as shown by their pollination mechanism as well as by the presence of the pigment delphinidin. In course of time, these may have given rise to the scarlet flowered varieties, the intermediate step being the species and varieties containing cyanidin as the main pigment. Some varieties of the same species have been found to contain both cyanidin and pelargonidin. The cyanidin-containing varieties appear as an intermediate stage through which the highly evolved pelargonidin-containing varieties have developed.

IT 134-04-3 528-53-0 528-58-5 29907-19-5 38533-30-1

53925-32-9 56190-03-5

RL: BIOL (Biological study)

(of *Salvia* species, evolution and flower color in relation to)

L3 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1981:71520 CAPLUS

DN 94:71520

TI Treatment of atheroma

IN Majoie, Bernard

PA Societe de Recherches Industrielles (SORI) S. A., Fr.

SO U.S., 4 pp.

CODEN: USXXAM

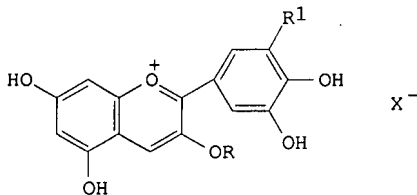
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4229439	A	19801021	US 1977-853422	19771121
PRAI	US 1977-853422	A	19771121		
OS	MARPAT 94:71520				
GI					

*pnw*



I

AB Compns. containing anthocyanidins I (R = glycosyl; R1 = H, OH, OMe; X = anion) are useful for treatment of atheroma and angiopathies. Thus, an injectable composition containing cyanidin-3-glucoside chloride [7084-24-4] at 50 mg/day for 21 days in 50 patients with arterial hypertension showed improvement in 40 patients.

IT 528-53-0 528-58-5 1429-30-7 6906-38-3 6988-81-4 7084-24-4  
29907-19-5 38533-30-1

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(pharmaceuticals containing, for atheroma and angiopathy treatment)

- L3 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1978:19014 CAPLUS  
 DN 88:19014  
 TI Isolation and characterization of anthocyanin pigment from  
 phosphorus-deficient maize plants  
 AU Bhatla, S. C.; Pant, R. C.  
 CS Dep. Bot., Univ. Delhi, Delhi, India  
 SO Current Science (1977), 46(20), 700-2  
 CODEN: CUSCAM; ISSN: 0011-3891  
 DT Journal  
 LA English  
 AB P deficiency in maize (*Zea mays* var Ganga-5) resulted in the accumulation  
 of anthocyanin pigment in leaves. The accumulating pigment was extracted in  
 MeOH-HCl (99:1) and a part of it was hydrolyzed to sep. the aglycon  
 (anthocyanidin) and the sugar moieties. The purified anthocyanin pigment  
 and its aglycon were subjected to chromatog. and spectrophotometric  
 analyses and the pigment was identified as cyanidin-3-glycoside, a  
 monoside. The sugar moiety was identified as rhamnose. On the basis of  
 these studies, the accumulating pigment was characterized as  
 cyanidin-3-rhamnoside.  
 IT 38533-30-1  
 RL: BIOL (Biological study)  
 (of phosphorus-deficient corn plant)
- L3 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1977:402369 CAPLUS  
 DN 87:2369  
 TI Chemotaxonomic investigations on the flavonoid compounds in the leaves of  
*Saxifraga aizoon* Jacq  
 AU Pawlowska, Lucyna  
 CS Inst. Bot., PAN, Krakow, Pol.  
 SO Acta Societatis Botanicorum Poloniae (1976), 45(4), 383-93  
 CODEN: ASBNA2; ISSN: 0001-6977  
 DT Journal  
 LA English  
 AB Flavonoid compds. of *S. aizoon* were isolated by extraction with MeOH and separated  
 and determined by thin-layer chromatog. combined with UV spectrometry. The  
 following compds. were found: kaempferol, quercetin, ellagic and  
 chlorogenic acids, chlorogenic and ferulic acid esters, cyanidin  
 3-xyloside, cyanidin 3-rhamnoside, cyanidin 3-glucoside, quercetin  
 3-rhamnoglucoside, and quercetin 3-rhamnoside.  
 IT 117-39-5 153-18-4 327-97-9 327-97-9D, esters 476-66-4 520-18-3  
 522-12-3 1135-24-6D, esters 7084-24-4 29761-24-8 38533-30-1  
 RL: BIOL (Biological study)  
 (of *Saxifraga aizoon*, taxonomy in relation to)
- L3 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1977:54070 CAPLUS  
 DN 86:54070  
 TI Anthocyanin composition of taro  
 AU Chan, Harvey T., Jr.; Kao-Jao, Tsung Hui C.; Nakayama, T. O. M.  
 CS Hawaii Fruit Lab., ARS, Honolulu, HI, USA  
 SO Journal of Food Science (1977), 42(1), 19-21  
 CODEN: JFDSA2; ISSN: 0022-1147  
 DT Journal  
 LA English  
 AB Anthocyanins were extracted from taro corms with 50% MeOH, isolated by  
 adsorption on insol. poly(vinyl pyrrolidinone), and purified by thin-layer  
 chromatog. The pigments were identified by chromatog. and photometry as  
 pelargonidin 3-glucoside [18466-51-8], cyanidin 3-rhamnoside [38533-30-1],  
 and cyanidin 3-glucoside [7084-24-4]. Levels of  
 anthocyanins were highest in the skin of the corm, 16.0 mg%, with equal  
 amts., 4.29 mg%, in both corm and petiole. Anthocyanogens also were  
 present.  
 AB . . . pyrrolidinone), and purified by thin-layer chromatog. The  
 pigments were identified by chromatog. and photometry as pelargonidin  
 3-glucoside [18466-51-8], cyanidin 3-rhamnoside [38533-30-1],  
 and cyanidin 3-glucoside [7084-24-4]. Levels of anthocyanins were highest  
 in the skin of the corm, 16.0 mg%, with equal amts., . . .  
 IT 7084-24-4 18466-51-8 38533-30-1  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
 BIOL (Biological study); OCCU (Occurrence)  
 (of *Colocasia esculenta*)
- L3 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

- AN 1975:28661 CAPLUS  
 DN 82:28661  
 TI Anthocyanin biosynthesis in Pisum. Sequence studies in pigment production  
 AU Statham, Carmel M.; Crowden, Ronald K.  
 CS Dep. Bot., Univ. Tasmania, Hobart, Australia  
 SO Phytochemistry (Elsevier) (1974), 13(9), 1835-40  
 CODEN: PYTCAS; ISSN: 0031-9422  
 DT Journal  
 LA English  
 AB The sequence of anthocyanin accumulation during flower development in 4 flower-color mutants of Pisum and in Lathyrus odoratus var Chloe, shows a progression from methylated to unmethylated anthocyanidins, and the replacement of 3-O-rhamnoside by 3-O-sambubioside and 3-O-sophoroside. This behavior is explained in terms of the activity gene Cr.  
 IT 2611-67-8 16727-02-9 17670-06-3 33012-73-6 38533-30-1  
 53859-11-3 53859-12-4 53925-32-9 53925-33-0  
 RL: BIOL (Biological study)  
 (of pea, flower development in relation to)
- L3 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1972:446967 CAPLUS  
 DN 77:46967  
 TI Anthocyanins in the fruit of Cactus opuntia  
 AU Duro, Francesco; Condorelli, Pasquale  
 CS Ist. Chim. Farm. Tossicol., Univ. Catania, Catania, Italy  
 SO Quaderni di Merceologia (1971), 10(1), 39-48  
 CODEN: QUMEAG; ISSN: 0523-9559  
 DT Journal  
 LA Italian  
 AB Two anthocyanins were isolated from the juice of C. opuntia [Opuntia compressa]. In the yellow prickly pear juice cyanidin 3-rhamnoside (I) prevailed, with slight traces of petunidin 3,5-diglucoside (II), while in the red fruit juice a great amount of II was found, with small amts. of I.  
 IT 25846-73-5 38533-30-1  
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified);  
 BIOL (Biological study); OCCU (Occurrence)  
 (of Opuntia compressa fruit)
- L3 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1966:509949 CAPLUS  
 DN 65:109949  
 OREF 65:20510c-e  
 TI Oxidase activity in ecotypic populations of Typha latifolia  
 AU McNaughton, S. J.  
 CS Syracuse Univ., Syracuse, NY  
 SO Nature (London, United Kingdom) (1966), 211(5056), 1377-9  
 CODEN: NATUAS; ISSN: 0028-0836  
 DT Journal  
 LA English  
 AB cf. CA 64, 8644f. Broadleaf cattail (T. latifolia) rhizomes were collected at Redmond and Beaverton, Ore., which are 940 and 60 m., resp., above sea level; weather reports substantiated climatic differences at these places. The rhizomes were transplanted in the greenhouse at Portland State College and leaf samples were taken in late June, early July, and late August. Chloroplasts were isolated from leaves of the greenhouse-grown plants and from leaves of plants from mature populations. With catechol as a substrate, the rate of increase of enzyme activity over the range of 17-24° was 1.4 for Beaverton and 3.7 for Redmond plants. Glycolate oxidation increased with increased temperature (17-27°) in the Redmond plants and was the reverse for Beaverton plants. Data indicated that glycolic acid oxidase activity (Q10) was dependent upon daytime temps. at the native site. Data indicate that T. latifolia from climatically distinct sites are enzymically distinct, and that enzymic activity may be regulated by environmental conditions.  
 IT 2934-97-6 6018-40-2 6487-33-8 38533-30-1  
 (Derived from data in the 7th Collective Formula Index (1962-1966))
- L3 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1966:509948 CAPLUS  
 DN 65:109948  
 OREF 65:20510b-c  
 TI The anthocyanin of Chamaecyparis conelets  
 AU Santamour, Frank S., Jr.  
 CS Morris Arboretum, Philadelphia, PA  
 SO Morris Arboretum Bull. (1966), 17(3), 50

DT Journal  
 LA English  
 AB cf. CA 64, 18030f. Staminate conelets of *C. lawsoniana*, *C. obtusa* and *C. pisifera* contained only cyanidin 3-rhamnoside. Quercitrin was also present. It is suggested that these 2 glycosides may be found together in other conifers.

IT 38533-30-1  
 (Derived from data in the 7th Collective Formula Index (1962-1966))

L3 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1963:422016 CAPLUS

DN 59:22016

OREF 59:4025g-h,4026a

TI Plant polyphenols. IX. The glycosidic pattern of anthocyanin pigments

AU Harborn, J. B.

CS John Innes Inst., Hertford, UK

SO Phytochemistry (Elsevier) (1963), 2, 85-97

CODEN: PYTCAS; ISSN: 0031-9422

DT Journal

LA Unavailable

AB cf. CA 57, 15513i. Twenty-three new anthocyanins have been identified and their Rf values and spectral properties recorded. They are the 3-galactoside of pelargonidin (I); the 3-rhamnosides of peonidin (II), petunidin (III), and malvidin (IV); the 3-sambubioside of I; the 3-xylosylgalactosides of I, cyanidin (V), and II; the 3-sophorosides of I and V; the 5-glucoside-3-sophorosides of I and V; the 7-glucoside-3-sophoroside of I; the 5-glucoside-3-rhamnosides of I, II, III, IV, V, and delphinidin; the 5-glucoside-3sambubiosides of I and V; the 3,5-diglucoside of rosinidin; and the 5-glucoside of luteolinidin. They occur variously, usually in the flowers, in spp. of *Brassica*, *Fagus*, *Gesneria*, *Lathyrus*, *Matthiola*, *Papaver*, *Primula*, *Raphanus*, and *Streptocarpus*. Known anthocyanins have been identified in these and other genera. As a result of this survey, previous structures for pigments of corn poppy, garden stock, and red cabbage have been revised.

IT 132-37-6P, Peonin 2611-67-8P, Cyanin 7084-24-4P, Chrysanthemin 7228-78-6P, Enin 13089-93-5P, 1-Benzopyrylium, 2-(3,4-dihydroxyphenyl)-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-, chloride 16727-02-9P, 1-Benzopyrylium, 2-(3,4-dihydroxyphenyl)-3-[(2-O- $\beta$ -D-glucopyranosyl- $\beta$ -D-glucopyranosyl)oxy]-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-, chloride 16727-30-3P, Malvin 17334-58-6P, Pelargonin 17670-06-3P, Delphin 18376-31-3P, 1-Benzopyrylium, 2-(3,4-dihydroxyphenyl)-3-[(2-O- $\beta$ -D-glucopyranosyl- $\beta$ -D-glucopyranosyl)oxy]-5,7-dihydroxy-, chloride 18466-51-8P, Callistephin 18719-76-1P, Keracyanin 20016-74-4P, Rosinidin, 3,5-diglucoside 27661-36-5P, Idein 28148-89-2P, 1-Benzopyrylium, 3-( $\beta$ -D-galactopyranosyloxy)-5,7-dihydroxy-2-(4-hydroxy-3-methoxyphenyl)-, chloride 30104-49-5P, 1-Benzopyrylium, 5,7-dihydroxy-2-(4-hydroxyphenyl)-3-[(2-O- $\beta$ -D-xylofuranosyl- $\beta$ -D-glucopyranosyl)oxy]-, chloride 32221-58-2P, 1-Benzopyrylium, 3,5-bis( $\beta$ -D-glucopyranosyloxy)-2-(4-hydroxy-3,5-dimethoxyphenyl)-7-methoxy-, chloride 34425-22-4P, 1-Benzopyrylium, 3-( $\beta$ -D-galactopyranosyloxy)-5,7-dihydroxy-2-(4-hydroxyphenyl)-, chloride 38533-30-1P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-, chloride 53859-11-3P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-2-(4-hydroxy-3-methoxyphenyl)-, chloride 53925-28-3P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-5,7-dihydroxy-2-(4-hydroxy-3,5-dimethoxyphenyl)-, chloride 53925-29-4P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-2-(4-hydroxy-3,5-dimethoxyphenyl)-, chloride 53925-30-7P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-2-(3,4-dihydroxy-5-methoxyphenyl)-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-, chloride 53925-31-8P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-2-(3,4,5-trihydroxyphenyl)-, chloride 53925-32-9P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-5-( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-2-(4-hydroxyphenyl)-, chloride 55821-57-3P, 1-Benzopyrylium, 2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-3-[(O- $\beta$ -D-xylopyranosyl- $\beta$ -D-galactopyranosyl)oxy]-, chloride 56552-43-3P, 1-Benzopyrylium, 2-(3,4-dihydroxy-5-methoxyphenyl)-3,5-bis( $\beta$ -D-glucopyranosyloxy)-7-hydroxy-, chloride 72551-79-2P, 1-Benzopyrylium, 3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-5,7-dihydroxy-2-(4-hydroxy-3-methoxyphenyl)-, chloride 86279-08-5P, 1-Benzopyrylium, 3-[(2-O- $\beta$ -D-glucopyranosyl- $\beta$ -D-glucopyranosyl)oxy]-7-( $\beta$ -D-glucopyranosyloxy)-5-hydroxy-2-(4-hydroxyphenyl)-, chloride 101203-52-5P, 1-Benzopyrylium,

3-[(6-deoxy- $\alpha$ -L-mannopyranosyl)oxy]-2-(3,4-dihydroxy-5-methoxyphenyl)-5,7-dihydroxy-, chloride 102521-86-8P, 1-Benzopyrylium, 3,7-bis( $\beta$ -D-glucopyranosyloxy)-5-hydroxy-2-(4-hydroxyphenyl)-, chloride 103064-79-5P, 1-Benzopyrylium, 5,7-dihydroxy-2-(4-hydroxyphenyl)-3-[(O- $\beta$ -D-xylopyranosyl- $\beta$ -D-glucopyranosyl)oxy]-, chloride 103102-91-6P, 3-[(6-O- $\beta$ -D-Glucopyranosyl-D-glucosyl)oxy]-4',5,7-trihydroxyflavylum chloride 103189-13-5P, 4',5,7-Trihydroxy-3-[(6-O- $\beta$ -L-rhamnosyl-D-glucosyl)oxy]flavylum chloride 103189-14-6P, 1-Benzopyrylium, 3-[(2-O- $\beta$ -D-glucopyranosyl-D-glucopyranosyl)oxy]-5,7-dihydroxy-2-(4-hydroxyphenyl)-, chloride 105087-47-6P, 5-(D-Glucosyloxy)-4',7-dihydroxy-3-[(6-O- $\beta$ -L-rhamnosyl-D-glucosyl)oxy]flavylum chloride 106198-07-6P, 5-(D-Glucosyloxy)-4',7-dihydroxy-3-[(2-O- $\beta$ -D-xylofuranosyl-D-glucosyl)oxy]flavylum chloride 106249-11-0P, 5-(D-Glucosyloxy)-4',7-dihydroxy-3',5'-dimethoxy-3-[(6-O- $\beta$ -L-rhamnosyl-D-glucosyl)oxy]flavylum chloride 155380-00-0P, 1-Benzopyrylium, 5,7-dihydroxy-2-(4-hydroxy-3-methoxyphenyl)-3-[(2-O- $\beta$ -D-xylopyranosyl- $\beta$ -D-galactopyranosyl)oxy]-, chloride  
 RL: PREP (Preparation)  
 (preparation of)

L3 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1962:62437 CAPLUS  
 DN 56:62437  
 OREF 56:12011h-i,12012a  
 TI Plant polyphenols. V. Occurrence of azalein and related pigments in flowers of Plumbago and Rhododendron species  
 AU Harborne, J. B.  
 CS John Innes Inst., Bayfordbury, UK  
 SO Archives of Biochemistry and Biophysics (1962), 96, 171-8  
 CODEN: ABBIA4; ISSN: 0003-9861  
 DT Journal  
 LA Unavailable  
 AB cf. CA 56, 7706c.-Azalein (5-methylquercetin 3-rhamnoside) (I) and a new anthocyanidin present as the 3-rhamnoside were isolated from *P. capensis*. The 3-rhamnosides of pelargonidin, cyanidin, delphinidin, and kaempferol were found in *P. rosea*. I was found in 44 out of 83 *Rhododendron* spp. examined The 3-galactoside and 3-arabinoside of quercetin and the 3-arabinoside of cyanidin were found for the first time in *Rhododendron* flowers.  
 IT 27214-72-8 29907-19-5 30370-87-7 38533-30-1 56190-03-5  
 (Derived from data in the 7th Collective Formula Index (1962-1966))  
 L3 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1961:28581 CAPLUS  
 DN 55:28581  
 OREF 55:5672g-i  
 TI Flavonoid pigments of *Lathyrus odoratus*  
 AU Harborne, J. B.  
 CS John Innes Hort. Inst., Bayfordbury, UK  
 SO Nature (London, United Kingdom) (1960), 187, 240-1  
 CODEN: NATUAS; ISSN: 0028-0836  
 DT Journal  
 LA Unavailable  
 AB Pigments of 3 varieties of *L. odoratus*; the Air Warden, the Harrow, and the Jupiter, representing, resp., the orange pelargonidin, the magenta cyanidin, and the mauve delphinidin color classes were characterized by means of paper chromatography and absorption spectrophotometry. Nineteen anthocyanins and three flavonol glycosides were isolated and identified as follows: in Air Warden, pelargonidin 3-rhamnoside, -5-glucoside-3-rhamnoside, -3-glucoside, -3-xylosylglucoside, and -3,5-di-glucoside and kaempferol 3-rhamnoside; in Harrow, cyanidin and peonidin 3-rhamnoside, -5-glucoside-3-rhamnoside, -3-glucoside, and -3-xylosylglucoside, peonidin 3,5-di-glucoside and kaempferol and quercetin 3-rhamnoside; in Jupiter, delphinidin and petunidin 3-rhamnoside, delphinidin, petunidin, and malvidin 5-glucoside-3-rhamnoside, and kaempferol, quercetin, and myricetin 3-rhamnoside.  
 IT 132-37-6, Peonin 134-01-0, 1-Benzopyrylium, 3,5,7-trihydroxy-2-(4-hydroxy-3-methoxyphenyl)-, chloride 134-04-3, 1-Benzopyrylium, 3,5,7-trihydroxy-2-(4-hydroxyphenyl)-, chloride 522-12-3, Quercitrin 6906-39-4, Glucoside, peonidin-3 7084-24-4, Chrysanthemin 17334-58-6, Pelargonin 17912-87-7, Myricitrin 18466-51-8, Callistephin 29907-19-5, Rhamnoside, delphinidin-3 38533-30-1, Rhamnoside, cyanidin-3 53925-29-4, Malvidin, 5-glucoside 3-rhamnoside 56190-03-5, Rhamnoside, pelargonidin-3 72551-79-2, Rhamnoside, peonidin-3 125107-91-7, Rhamnoside, petunidin-3 132536-65-3, Afzelin,

10/578,250

4'-arabinoside  
(in Lathyrus odoratus)

=> d his

(FILE 'HOME' ENTERED AT 21:21:51 ON 25 SEP 2007)

FILE 'REGISTRY' ENTERED AT 21:22:16 ON 25 SEP 2007

                  E CYANIDIN-3-RHAMNOSIDE/CN  
                  E CYANIDIN 3-RHAMNOSIDE/CN  
L1                 1 S E3  
                  E PELARGONIDIN 3-RHAMNOSIDE/CN  
                  E PELARGONIDIN-3-RHAMNOSIDE/CN  
                  E PELARGONIDIN/CN  
L2                 1 S E3

FILE 'CAPLUS' ENTERED AT 21:24:39 ON 25 SEP 2007

L3                 25 S L1  
                  E DIABETES+ALL/CT  
L4                 6 S L3 AND (GLUCOSE OR DIABETES)

10/578,250

FILE 'REGISTRY' ENTERED AT 21:22:16 ON 25 SEP 2007

E CYANIDIN-3-RHAMNOSIDE/CN  
E CYANIDIN 3-RHAMNOSIDE/CN  
L1 1 S E3  
E PELARGONIDIN 3-RHAMNOSIDE/CN  
E PELARGONIDIN-3-RHAMNOSIDE/CN  
E PELARGONIDIN/CN  
L2 1 S E3

FILE 'CAPLUS' ENTERED AT 21:24:39 ON 25 SEP 2007

L3 25 S L1  
E DIABETES+ALL/CT  
L4 6 S L3 AND (GLUCOSE OR DIABETES)  
L5 7 S L3 AND ACEROLA



10/578,250

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal600txm

PASSWORD:

\*\*\*\*\* RECONNECTED TO STN INTERNATIONAL \*\*\*\*\*  
SESSION RESUMED IN FILE 'CAPLUS' AT 21:40:16 ON 25 SEP 2007  
FILE 'CAPLUS' ENTERED AT 21:40:16 ON 25 SEP 2007  
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	105.11	120.92
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-24.18	-24.18

=> d his

(FILE 'HOME' ENTERED AT 21:21:51 ON 25 SEP 2007)

FILE 'REGISTRY' ENTERED AT 21:22:16 ON 25 SEP 2007

E CYANIDIN-3-RHAMNOSIDE/CN  
E CYANIDIN 3-RHAMNOSIDE/CN  
L1 1 S E3  
E PELARGONIDIN 3-RHAMNOSIDE/CN  
E PELARGONIDIN-3-RHAMNOSIDE/CN  
E PELARGONIDIN/CN  
L2 1 S E3

FILE 'CAPLUS' ENTERED AT 21:24:39 ON 25 SEP 2007

L3 25 S L1  
E DIABETES+ALL/CT  
L4 6 S L3 AND (GLUCOSE OR DIABETES)

=> s l3 and acerola

226 ACEROLA  
4 ACEROLAS  
228 ACEROLA  
(ACEROLA OR ACEROLAS)  
L5 7 L3 AND ACEROLA

=> d bib abs kwic 1-7 l5

L5 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2007:911577 CAPLUS  
DN 147:242711  
TI Skin-lightening agent containing polyphenol compound  
IN Uchida, Eriko; Hanamura, Takayuki; Mayama, Chisato; Aoki, Hitoshi  
PA Nichirei Foods Inc., Japan  
SO U.S. Pat. Appl. Publ., 16pp., Cont.-in-part of Appl. No. PCT/JP05/015009.  
CODEN: USXXCO  
DT Patent  
LA English  
FAN.CNT 2

11/708,021

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2007189997	A1	20070816	US 2007-708021	20070220
WO 2006019114	A1	20060223	WO 2005-JP15009	20050817
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,				

McIntosh

CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM

PRAI JP 2004-238702 A 20040818  
WO 2005-JP15009 A2 20050817

AB This invention relates to a method for inhibiting melanin formation in a subject comprising administering an effective amount of an Acerola-derived polyphenol compound, an Acerola polyphenol fraction, or the other polyphenol compound to a subject. This method comprises lightening the subject's skin by the inhibition of melanin formation. This method also comprises administering synergistically effective amts. of an Acerola-derived polyphenol compound, an Acerola polyphenol fraction, or the other polyphenol compound in combination with ascorbic acid or an ascorbic acid derivative to a subject.

AB This invention relates to a method for inhibiting melanin formation in a subject comprising administering an effective amount of an Acerola-derived polyphenol compound, an Acerola polyphenol fraction, or the other polyphenol compound to a subject. This method comprises lightening the subject's skin by the inhibition of melanin formation. This method also comprises administering synergistically effective amts. of an Acerola-derived polyphenol compound, an Acerola polyphenol fraction, or the other polyphenol compound in combination with ascorbic acid or an ascorbic acid derivative to a subject.

ST skin lightening agent polyphenol Acerola cosmetic.

IT 117-39-5, Quercetin 482-36-0, Hyperoside 522-12-3,  
Quercetin-3-rhamnoside 21637-25-2, Isoquercitrin 29838-67-3, Astilbin 38533-30-1, Cyanidin-3-rhamnoside 56190-03-5,  
Pelargonidin-3-rhamnoside  
RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(skin-lightening agent containing polyphenol compound)

L5 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:251976 CAPLUS

DN 146:273178

TI Lipid absorption inhibitors, lipase inhibitors, and foods containing acerola leaves or their preparations

IN Aoki, Hitoshi; Hanamura, Takayuki; Mayama, Chisato

PA Nichirei Foods Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 9pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2007055980	A	20070308	JP 2005-246325	20050826
PRAI	JP 2005-246325		20050826		
AB	Title inhibitors and foods are claimed. Thus, boiling water extract of acerola leaves at 1 mg/mL inhibited porcine pancreatic lipase activity by .apprx.50% and lowered plasma triglyceride level in cotton seed oil-fed mice.				
TI	Lipid absorption inhibitors, lipase inhibitors, and foods containing acerola leaves or their preparations				
AB	Title inhibitors and foods are claimed. Thus, boiling water extract of acerola leaves at 1 mg/mL inhibited porcine pancreatic lipase activity by .apprx.50% and lowered plasma triglyceride level in cotton seed oil-fed.				
ST	lipid absorption inhibitor food acerola leaf ext; lipase inhibitor food acerola leaf ext				
IT	Adipose tissue Antiobesity agents Body weight Health food Hypolipemic agents Malpighia emarginata (lipase inhibitors containing boiling water extract of acerola leaves for inhibition of lipid absorption and decreasing body weight)				
IT	Lipids, biological studies RL: BSU (Biological study, unclassified); BIOL (Biological study) (lipase inhibitors containing boiling water extract of acerola leaves for inhibition of lipid absorption and decreasing body weight)				
IT	Blood (neutral lipids; lipase inhibitors containing boiling water extract of acerola leaves for inhibition of lipid absorption and				

- decreasing body weight)
- IT Lipids, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(neutral, blood; lipase inhibitors containing boiling water extract of acerola leaves for inhibition of lipid absorption and decreasing body weight)
- IT Phenols, processes  
RL: REM (Removal or disposal); PROC (Process)  
(polyphenols, nonpolymeric, removal of; lipase inhibitors containing boiling water extract of acerola leaves for inhibition of lipid absorption and decreasing body weight)
- IT 7732-18-5, Water, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(boiling; lipase inhibitors containing boiling water extract of acerola leaves for inhibition of lipid absorption and decreasing body weight)
- IT 9001-62-1, Lipase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(lipase inhibitors containing boiling water extract of acerola leaves for inhibition of lipid absorption and decreasing body weight)
- IT 38533-30-1, Cyanidin-3-rhamnoside 56190-03-5, Pelargonidin-3-rhamnoside  
RL: REM (Removal or disposal); PROC (Process)  
(removal of; lipase inhibitors containing boiling water extract of acerola leaves for inhibition of lipid absorption and decreasing body weight)
- L5 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2007:210743 CAPLUS  
DN 146:499678  
TI The high ascorbic acid content is the main cause of the low stability of anthocyanin extracts from acerola  
AU De Rosso, Veridiana V.; Mercadante, Adriana Z.  
CS Department of Food Science, Faculty of Food Engineering, State University of Campinas (UNICAMP), Sao Paulo, CEP 13083-862, Brazil  
SO Food Chemistry (2007), 103(3), 935-943  
CODEN: FOCHDJ; ISSN: 0308-8146  
PB Elsevier B.V.  
DT Journal  
LA English  
AB Acerola is considered to be one of the best natural sources of ascorbic acid (AA) and, for this reason, the influence of this component on the stability of anthocyanins from acerola exts. was determined and compared to those from acai, which have no detectable AA. The addition of three different levels of AA to the solution of acai anthocyanins resulted in a 110-fold increase in the degradation rate (kobs) at the highest fortification level (276 mg/mL). The fact that the flavonoid concentration of the acai anthocyanin extract was 10 times higher than that of the acerola was probably responsible for the three times higher stability of the AA-fortified acai system compared to the acerola system, both at the same AA concentration and similar total polyphenol levels. The higher the level of AA addition to acai anthocyanin solns., the greater was the color fading, indicated by increase of L\* and decrease of a\* and C\* values.
- RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT
- TI The high ascorbic acid content is the main cause of the low stability of anthocyanin extracts from acerola
- AB Acerola is considered to be one of the best natural sources of ascorbic acid (AA) and, for this reason, the influence of this component on the stability of anthocyanins from acerola exts. was determined and compared to those from acai, which have no detectable AA. The addition of three different levels. . . mg/mL). The fact that the flavonoid concentration of the acai anthocyanin extract was 10 times higher than that of the acerola was probably responsible for the three times higher stability of the AA-fortified acai system compared to the acerola system, both at the same AA concentration and similar total polyphenol levels. The higher the level of AA addition to. . .
- ST ascorbate anthocyanin acerola acai
- IT Malpighia  
(high ascorbic acid content related to anthocyanin instability in acerola exts.)
- IT Anthocyanins  
Flavonoids  
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(high ascorbic acid content related to anthocyanin instability in acerola exts.)

IT Euterpe oleracea  
(high ascorbic acid content related to anthocyanin instability in acerola exts. compared with acai)

IT Phenols, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(polyphenols, nonpolymeric; high ascorbic acid content related to anthocyanin instability in acerola exts.)

IT 50-81-7, Ascorbic acid, biological studies 7084-24-4,  
Cyanidin-3-glucoside 18719-76-1, Cyanidin-3-rutinoside  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(high ascorbic acid content related to anthocyanin instability in acerola exts.)

IT 38533-30-1, Cyanidin-3-rhamnoside 56190-03-5,  
Pelargonidin-3-rhamnoside 936479-47-9  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(high ascorbic acid content related to anthocyanin instability in acerola exts. compared with acai)

L5 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:167977 CAPLUS  
DN 144:239246  
TI Skin-lightening agent containing polyphenol compounds  
IN Uchida, Eriko; Hanamura, Takayuki; Mayama, Chisato; Aoki, Hitoshi  
PA Nichirei Foods Inc., Japan  
SO PCT Int. Appl., 29 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2006019114	A1	20060223	WO 2005-JP15009	20050817
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1787624	A1	20070523	EP 2005-780368	20050817
R: DE, ES, FR, GB, IT				
US=2007189997	A1	20070816	US 2007-708021	20070220
PRAK JP 2004-238702	A	20040818		
WO 2005-JP15009	W	20050817		

AB Disclosed is a skin-lightening agent sufficiently effective in lightening the skin. Also provided is a melanin generation inhibitor which contains as an active ingredient a polyphenol compound derived from Acerola, an Acerola polyphenol fraction, or another polyphenol compound, and which may optionally further contain ascorbic acid or an ascorbic acid derivative as an active ingredient. A cosmetic composition, food or beverage composition, or medicinal composition is further provided which contains the tyrosinase inhibitor. For example, fruits of Acerola were extracted with TFA/methanol solvent. Cyanidin 3-rhamnoside and pelargonidin 3-rhamnoside were isolated from the extract and in vitro IC50 values for inhibiting activities of tyrosinase were 33 and 5.6  $\mu$ M, resp.

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB . . . the skin. Also provided is a melanin generation inhibitor which contains as an active ingredient a polyphenol compound derived from Acerola, an Acerola polyphenol fraction, or another polyphenol compound, and which may optionally further contain ascorbic acid or an ascorbic acid derivative as . . . composition, food or beverage composition, or medicinal composition is further provided which contains the tyrosinase inhibitor. For example, fruits of Acerola were extracted with TFA/methanol solvent. Cyanidin 3-rhamnoside and pelargonidin 3-rhamnoside were isolated from the extract and in vitro IC50 values. . . .

ST skin lightening polyphenol Acerola ext; cyanidin pelargonidin rhamnoside purifn Acerola ext tyrosinase inhibitor

- IT Aglycons  
RL: COS (Cosmetic use); FFD (Food or feed use); NPO (Natural product occurrence); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
(anthocyanidins; skin-lightening agent containing polyphenols from Acerola exts.)
- IT Melanins  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(formation inhibition by; skin-lightening agent containing polyphenols from Acerola exts.)
- IT Phenols, biological studies  
RL: COS (Cosmetic use); FFD (Food or feed use); NPO (Natural product occurrence); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
(polyphenols, nonpolymeric; skin-lightening agent containing polyphenols from Acerola exts.)
- IT Beverages  
Drug delivery systems  
Food  
Malpighia  
(skin-lightening agent containing polyphenols from Acerola exts.)
- IT Anthocyanins  
RL: COS (Cosmetic use); FFD (Food or feed use); NPO (Natural product occurrence); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
(skin-lightening agent containing polyphenols from Acerola exts.)
- IT Cosmetics  
(skin-lightening; skin-lightening agent containing polyphenols from Acerola exts.)
- IT 9002-10-2, Tyrosinase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibition by; skin-lightening agent containing polyphenols from Acerola exts.)
- IT 134-01-0, Peonidin 134-04-3, Pelargonidin 528-53-0, Delphinidin 528-58-5, Cyanidin 643-84-5, Malvidin  
RL: COS (Cosmetic use); FFD (Food or feed use); NPO (Natural product occurrence); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
(skin-lightening agent containing polyphenols from Acerola exts.)
- IT 38533-30-1P, Cyanidin 3-rhamnoside 56190-03-5P, Pelargonidin 3-rhamnoside  
RL: COS (Cosmetic use); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(skin-lightening agent containing polyphenols from Acerola exts.)
- IT 50-81-7, L-Ascorbic acid, biological studies  
RL: COS (Cosmetic use); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(skin-lightening agent containing polyphenols from Acerola exts.)

L5 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:426452 CAPLUS

DN 142:441885

TI Glucose absorption inhibitor and process for producing the same

IN Aoki, Hitoshi; Hanamura, Takayuki; Mayama, Chisato; Hirayama, Yasushi; Shimizu, Makoto

PA Nichirei Corporation, Japan

SO PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005044290	A1	20050519	WO 2004-JP16218	20041101
<p>W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW</p> <p>RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,</p>				

NE, SN, TD, TG

JP 2005139093	A	20050602	JP 2003-375323	20031105
EP 1685822	A1	20060802	EP 2004-799424	20041101
R: DE, ES, FR, GB, IT				
US 2007082077	A1	20070412	US 2006-578250	20060504
PRAI JP 2003-375323	A	20031105		
WO 2004-JP16218	W	20041101		

AB A glucose absorption inhibitor and a process for producing the inhibitor. The glucose absorption inhibitor contains as an active ingredient a substance which is derived from acerola and has glucose absorption inhibitory activity.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB . . . process for producing the inhibitor. The glucose absorption inhibitor contains as an active ingredient a substance which is derived from acerola and has glucose absorption inhibitory activity.

ST acerola polyphenol anthocyanin intestine glucose absorption inhibitor

IT Antidiabetic agents  
Diabetes mellitus  
Health food  
Human  
Intestine  
Malpighia  
(acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

IT Anthocyanins  
RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

IT Phenols, biological studies  
RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(polyphenols, nonpolymeric; acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

IT Biological transport  
(uptake; acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

IT 50-99-7, D-Glucose, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

IT 38533-30-1P, Cyanidin-3-rhamnoside 56190-03-5P, Pelargonidin-3-rhamnoside  
RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(acerola polyphenols and anthocyanins as glucose absorption inhibitors and process for producing the same)

L5 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:275690 CAPLUS

DN 142:341828

TI Hypoglycemic agents and AGE (advanced glycation endproducts) formation inhibitors from acerola, their medical use, and manufacture

IN Hanamura, Takayuki; Hagiwara, Toshihiko; Kawagishi, Hirokazu

PA Nichirei Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005082509	A	20050331	JP 2003-314207	20030905
PRAI JP 2003-314207		20030905		

AB Title agents and inhibitors, useful for prophylactic and therapeutic treatment of diabetes mellitus or diabetic complications, are manufactured by pulverization of acerola fruits, extraction, and optionally purification. Thus, cyanidin-3-rhamnoside, pelargonidin-3-rhamnoside, and quercitrin extracted from acerola fruits inhibited maltase and sucrase.

TI Hypoglycemic agents and AGE (advanced glycation endproducts) formation inhibitors from acerola, their medical use, and manufacture  
 AB . . . agents and inhibitors, useful for prophylactic and therapeutic treatment of diabetes mellitus or diabetic complications, are manufactured by pulverization of acerola fruits, extraction, and optionally purification. Thus, cyanidin-3-rhamnoside, pelargonidin-3-rhamnoside, and quercitrin extracted from acerola fruits inhibited maltase and sucrase.  
 ST hypoglycemic acerola cyanidin pelargonidin rhamnoside quercitrin; advanced glycation endproduct formation inhibitor acerola  
 IT Glycoproteins  
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (AGE (advanced glycosylation end product); hypoglycemic agents and AGE formation inhibitors containing acerola polyphenols)  
 IT Antidiabetic agents  
 Diabetes mellitus  
 Malpighia  
 (hypoglycemic agents and AGE formation inhibitors containing acerola polyphenols)  
 IT Anthocyanins  
 RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (hypoglycemic agents and AGE formation inhibitors containing acerola polyphenols)  
 IT Phenols, biological studies  
 RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (polyphenols, nonpolymeric; hypoglycemic agents and AGE formation inhibitors containing acerola polyphenols)  
 IT Glycosides  
 RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (quercetin; hypoglycemic agents and AGE formation inhibitors containing acerola polyphenols)  
 IT 522-12-3P, Quercitrin 38533-30-1P, Cyanidin-3-rhamnoside 56190-03-5P, Pelargonidin-3-rhamnoside  
 RL: PAC (Pharmacological activity); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (hypoglycemic agents and AGE formation inhibitors containing acerola polyphenols)  
 IT 9001-42-7, Maltase 37288-39-4, Sucrase  
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitors; hypoglycemic agents and AGE formation inhibitors containing acerola polyphenols)

L5 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2005:233432 CAPLUS  
 DN 142:335271  
 TI Structural and functional characterization of polyphenols isolated from acerola (Malpighia emarginata DC.) fruit  
 AU Hanamura, Takayuki, Hagiwara, Toshihiko; Kawagishi, Hirokazu  
 CS Research and Development Division, Proc. Foods Company, Nichirei Corporation, Chiba, 261-8545, Japan  
 SO Bioscience, Biotechnology, and Biochemistry (2005), 69(2), 280-286  
 CODEN: BBBIEJ; ISSN: 0916-8451  
 PB Japan Society for Bioscience, Biotechnology, and Agrochemistry  
 DT Journal  
 LA English  
 AB Two anthocyanins, cyanidin-3- $\alpha$ -O-rhamnoside (C3R) and pelargonidin-3- $\alpha$ -O-rhamnoside (P3R), and quercitrin (quercetin-3- $\alpha$ -O-rhamnoside), were isolated from acerola (Malpighia emarginata DC.) fruit. These polyphenols were evaluated based on the functional properties associated with diabetes mellitus or its complications, i.e., on the radical scavenging activity and the inhibitory effect on both  $\alpha$ -glucosidase and advanced glycation end product (AGE) formation. C3R and quercitrin revealed strong radical scavenging activity. While the inhibitory profiles of isolated polyphenols except quercitrin towards  $\alpha$ -glucosidase activity were low, all polyphenols strongly inhibited AGE formation.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

10/578,250

- TI Structural and functional characterization of polyphenols isolated from acerola (Malpighia emarginata DC.) fruit
- AB Two anthocyanins, cyanidin-3- $\alpha$ -O-rhamnoside (C3R) and pelargonidin-3- $\alpha$ -O-rhamnoside (P3R), and quercitrin (quercetin-3- $\alpha$ -O-rhamnoside), were isolated from acerola (Malpighia emarginata DC.) fruit. These polyphenols were evaluated based on the functional properties associated with diabetes mellitus or its complications, . . .
- IT Antidiabetic agents  
Antioxidants  
Health food  
Malpighia emarginata  
(Structural and functional characterization of polyphenols from acerola fruit)
- IT Phenols, biological studies  
RL: BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation) (polyphenols, nonpolymeric; Structural and functional characterization of polyphenols from acerola fruit)
- IT 522-12-3P 38533-30-1P 56190-03-5P  
RL: BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation) (Structural and functional characterization of polyphenols from acerola fruit)
- IT 9001-42-7,  $\alpha$ -Glucosidase  
RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibition; Structural and functional characterization of polyphenols from acerola fruit)